

Client's ref.: TSMC2003-1012/PE:SimonLu

Our ref.: 0503-A30093-USf/Yianhou/Steve/Nelson

**What Is Claimed Is:**

- 1           1.    A system for capacity management, comprising:  
2           an order management module to receive at least a first order  
3           having a period delivery demand directing a supplier  
4           to deliver products corresponding to the order before  
5           the end of the period; and  
6           a pull-in engine to receive a second order with a pull-in  
7           demand, push out the first order, and direct capacity  
8           reserved for the first order to meet the second order.
- 1           2.    The system of claim 1 further comprising an allocation  
2           module to allocate additional capacity for the first order.
- 1           3.    The system of claim 2 further comprising a planning  
2           module to generate a new manufacturing planning schedule and  
3           delivery dates for the first order and second order.
- 1           4.    The system of claim 1 wherein the first order further  
2           has a billing condition directing the supplier to generate a bill  
3           for the first order as late as possible.

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1           5.    A method for capacity management, comprising the  
2    steps of:

3           receiving at least a first order having a period delivery  
4           demand, in which the period delivery demand directs  
5           a supplier to deliver products corresponding to the  
6           order before the end of the period;

7           receiving a second order with a pull-in demand; and  
8           pushing out the first order, and directing capacity  
9           reserved for the first order to meet the second order.

1           6.    The method of claim 5 further comprising allocating  
2    additional capacity for the first order.

1           7.    The method of claim 6 further comprising generating  
2    a new manufacturing planning schedule and delivery dates for the  
3    first order and second order.

1           8.    The method of claim 5 wherein the first order further  
2    has a billing condition directing the supplier to generate a bill  
3    for the first order as late as possible.

1           9.    A system for capacity management, comprising:

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2           an order management module to receive at least a first order  
3           having a period delivery demand, in which the period  
4           delivery demand directs a supplier to deliver  
5           products corresponding to the order before the end  
6           of the period; and  
7           a pull-in engine to push out the first order, and direct  
8           capacity reserved for the first order to meet other  
9           orders if a production event occurs.

1           10. The system of claim 9 further comprising an allocation  
2           module to allocate additional capacity for the first order.

1           11. The system of claim 10 further comprising a planning  
2           module to generate a new manufacturing planning schedule and a  
3           delivery date for the first order.

1           12. The system of claim 9 wherein the first order further  
2           has a billing condition directing the supplier to generate a bill  
3           for the first order as late as possible.

1           13. A method for capacity management, comprising the  
2           steps of:

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3           receiving at least a first order having a period delivery  
4           demand, in which the period delivery demand directs  
5           a supplier to deliver products corresponding to the  
6           order before the end of the period; and  
7           pushing out the first order, and directing capacity  
8           reserved for the first order to meet another order  
9           if a production event occurs.

1           14. The method of claim 13 further comprising allocating  
2           another capacity for the first order.

1           15. The method of claim 14 further comprising generating  
2           a new manufacturing planning schedule and a delivery date for  
3           the first order.

1           16. The method of claim 13 wherein the first order further  
2           has a billing condition directing the supplier to generate a bill  
3           for the first order as late as possible.

1           17. A method for capacity management, comprising the  
2           steps of:

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3           separating orders based on respective corresponding  
4           delivery demand, thus identifying orders of a first  
5           type, in which orders of the first type direct a  
6           supplier to deliver products before the end of a  
7           period; and  
8           selecting at least one of the orders of the first type to  
9           be pushed out if another order with a pull-in demand  
10          is received or a production event occurs.

1           18. The method of claim 17 further comprising allocating  
2           additional capacity for the pushed out order.

1           19. The method of claim 18 further comprising generating  
2           a new manufacturing planning schedule and a delivery date for  
3           the pushed out order.

1           20. The method of claim 13 further comprising separating  
2           the orders based on a respective corresponding billing condition  
3           directing the supplier to generate a bill for the first order  
4           as late as possible.

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1           21. A machine-readable storage medium storing a computer  
2 program which when executed causes a computer to perform a  
3 capacity management method, the method comprising the steps of:

4           receiving at least a first order having a period delivery  
5           demand, in which the period delivery demand directs  
6           a supplier to deliver products corresponding to the  
7           order before the end of the period;

8           receiving a second order with a pull-in demand; and  
9           pushing out the first order, and directing capacity  
10          reserved for the first order to meet the second order.

1           22. The storage medium of claim 21 wherein the method  
2 further comprises a step of allocating additional capacity for  
3 the first order.

1           23. The storage medium of claim 22 wherein the method  
2 further comprises a step of generating a new manufacturing  
3 planning schedule and delivery dates for the first order and  
4 second order.

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1           24. The storage medium of claim 21 wherein the first order  
2 further has a billing condition directing the supplier to  
3 generate a bill for the first order as late as possible.

1           25. A machine-readable storage medium storing a computer  
2 program which when executed causes a computer to perform a  
3 capacity management method, the method comprising the steps of:  
4           receiving at least a first order having a period delivery  
5           demand, in which the period delivery demand directs  
6           a supplier to deliver products corresponding to the  
7           order before the end of the period; and  
8           pushing out the first order, and directing capacity  
9           reserved for the first order to meet other order if  
10          a production event occurs.

1           26. The storage medium of claim 25 wherein the method  
2 further comprises a step of allocating additional capacity for  
3 the first order.

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1           27. The storage medium of claim 26 wherein the method  
2 further comprises a step of generating a new manufacturing  
3 planning schedule and a delivery date for the first order.

1           28. The storage medium of claim 25 wherein the first order  
2 further has a billing condition directing the supplier to  
3 generate a bill for the first order as late as possible.

1           29. A machine-readable storage medium storing a computer  
2 program which when executed causes a computer to perform a  
3 capacity management method, the method comprising the steps of:

4           separating orders based on respective corresponding  
5           delivery demands, thus identifying orders of a first  
6           type, in which the orders of the first type indicate  
7           a supplier to deliver products before the end of a  
8           period; and

9           selecting at least one of the orders of the first type to

10           be pushed out if another order with a pull-in demand

11           is received or a production event occurs.



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1           30. The storage medium of claim 29 wherein the method  
2 further comprises a step of allocating additional capacity for  
3 the pushed out order.

1           31. The storage medium of claim 30 wherein the method  
2 further comprises a step of generating a new manufacturing  
3 planning schedule and a delivery date for the pushed out order.

1           32. The storage medium of claim 29 wherein the method  
2 further comprises a step of separating the orders based on a  
3 respective corresponding billing condition directing the  
4 supplier to generate a bill for the first order as late as  
5 possible.